

## **AMENDMENTS TO THE SPECIFICATION**

Please replace Paragraph [0003] with the following paragraph rewritten in amendment format:

**[0003]** Various attempts have been made to bond two or more completely formed composite laminate structures together via a suitable adhesive. U.S. Patent 4,786,343 ~~4,786,383~~, assigned to The Boeing Company, discloses various methods for bonding two or more composite laminate structures together via an adhesive. While these methods have proven effective in bonding a wide variety of complexly shaped composite laminate structures, it would nevertheless be desirable to provide a system and method in which the bonding of two or more complexly shaped composite structures can be accomplished on a suitable tool, in a single manufacturing operation, using an otherwise conventional vacuum assisted resin transfer molding process. More specifically, it would be highly desirable to provide a system and method in which dry fiber preforms (i.e., multi-layer preforms that have not yet been preimpregnated with resin) can be placed on a suitable tool with the preforms precisely aligned in the desired orientation relative to one another, with an adhesive material placed at the desired bond line(s), and the bonding of the preforms together accomplished immediately prior to infusing the preforms with resin, and all with a single manufacturing operation. This would eliminate the added labor associated with subsequently taking the finished composite laminate component pieces and precisely aligning same, in a separate manufacturing step, prior to adhering the independent component pieces together. It is further expected that a system and method which accomplishes heating and flowing of the adhesive into the surfaces of two or more independent, dry fiber preforms, will produce even greater migration of the viscous adhesive into the plies of each of the preforms.

Please replace Paragraph [0009] with the following paragraph rewritten in amendment format:

**[0009]** Figure 1 is a simplified view of a portion of the tool for performing ~~preforming~~ the method of the present invention and showing two independent dry fiber preforms in contact with one another ready to be bonded together;

Please replace Paragraph [0019] with the following paragraph rewritten in amendment format:

**[0019]** The vacuum bag 26 also includes at least one opening, and in the drawing of Figure 1 a pair of openings 33, which are in communication with a corresponding pair of lengths of conduit or tubing 34 leading to a resin reservoir 36. Tubing lengths 34 allow resin to be drawn in by the vacuum created by vacuum sources 28 from the resin reservoir 36 into the interior area defined by the vacuum bag 26. Again, however, depending upon the overall shape of the composite laminate structure being formed, a single resin supply line 34 and a single point of entry 33 ~~[[32]]~~ in the vacuum bag 26 may be sufficient to adequately supply the needed amount of resin to perform ~~preform~~ the molding process.

Please replace Paragraph [0024] with the following paragraph rewritten in amendment format:

**[0024]** The complete wetting of each of the preforms 14 and 16 with resin can be visually detected by an operator if the vacuum bag 26 comprises a translucent vacuum bag. If not, thorough wetting can be assumed as soon as the

resin begins to be drawn out of the preforms 14 and 16 and into each of the tubing sections 30 and 32 (Figure 1). At this point, the vacuum sources 28 are turned off and the flow of resin in each of the resin supply lines 34 is interrupted through the use of one or more conventional valves. It will be appreciated that some adjustment of the vacuum lines 30 and resin supply lines 34 can be performed to help in removing any air from the preform 16. Referring to Figure 3, at this point it can be seen that the thin film adhesive layer 20 has essentially disappeared, having essentially flowed into several plies of the preform 14 and several plies of portion 16a of the preform 16. The temperature of the preforms 14 and 16 is then raised to preferably between about 200°F (93°C) and 400°F (204°C) depending on the resin system, and more preferably about 350° (176°C). Again, however, it will be appreciated that these temperatures will depend on the resin being used.